STATE OF RHODE ISLAND
ENERGY EFFICIENCY & RESOURCE MANAGEMENT COUNCIL

CONSULTANT TEAM

EERMC Market Potential Study Data Refresh Update

Presented By: EERMC Consultant Team

Date: March 16, 2023

Outline

Market Potential Study Refresh Work To Date

Timeline Check In

Draft Results Overview

Next Steps & Council Discussion

MPS Work To Date

January

RIE, OER, and C-Team participated in kick-off meeting
Key questions initiated for dialogue

February

Working Session with RIE, OER, and C-Team to align on answers to key questions
Bi-weekly check-ins with Dunsky
EERMC Counsel issued letter to PUC on February 28th informing them of a delay in filing

March

Bi-weekly check ins
Initial view of draft results
2021-2023 Targets Report posted as EERMC meeting material for Councilor review

MPS Data Refresh Timeline

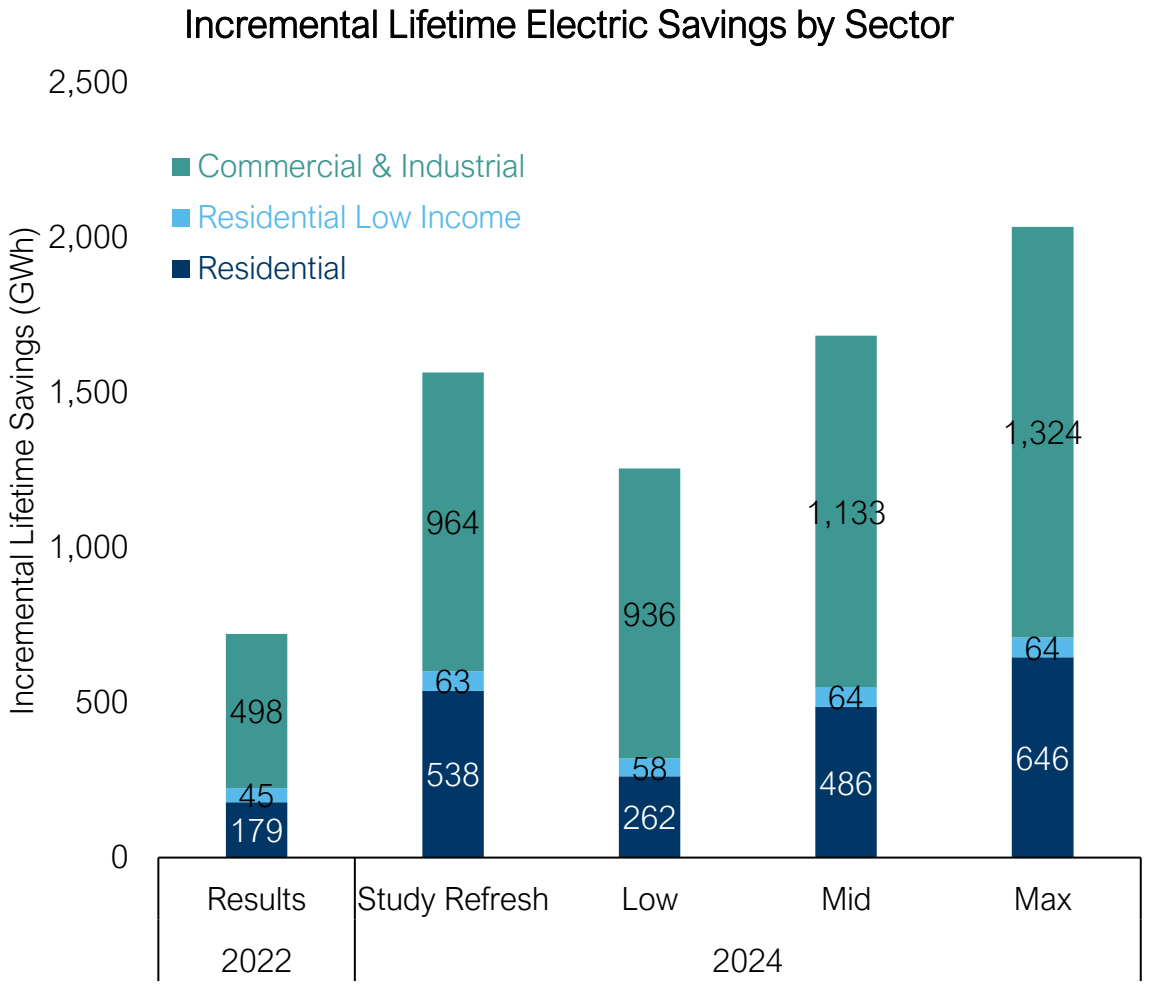
Task	Jan		Feb		Mar		Apr		May	
	1	*2*	*1*	*2*	*1*	*2*	*1*	*2*	*1*	*2*
Task 1: Identify data sources and collect input data	**D1. Data Request**									
Task 2: Estimate net effects of factors affecting baselines										
Task 3: Update measure list and gather data										
Task 4 and 4a: Estimate potential savings										
Tasks 1-3: Kick-off meeting, check-in meetings, and correspondence	**Kick off**	**M**	**M**	**M**	**M**	**M**	**M**			
Tasks 1-4: Reporting and recommendations and deliverables					**D4. Draft Results**		**D5. Final Results**			

Note: During contract negotiations, D2 and D3 were eliminated as formal deliverables.

M = Meeting **D** = Deliverable

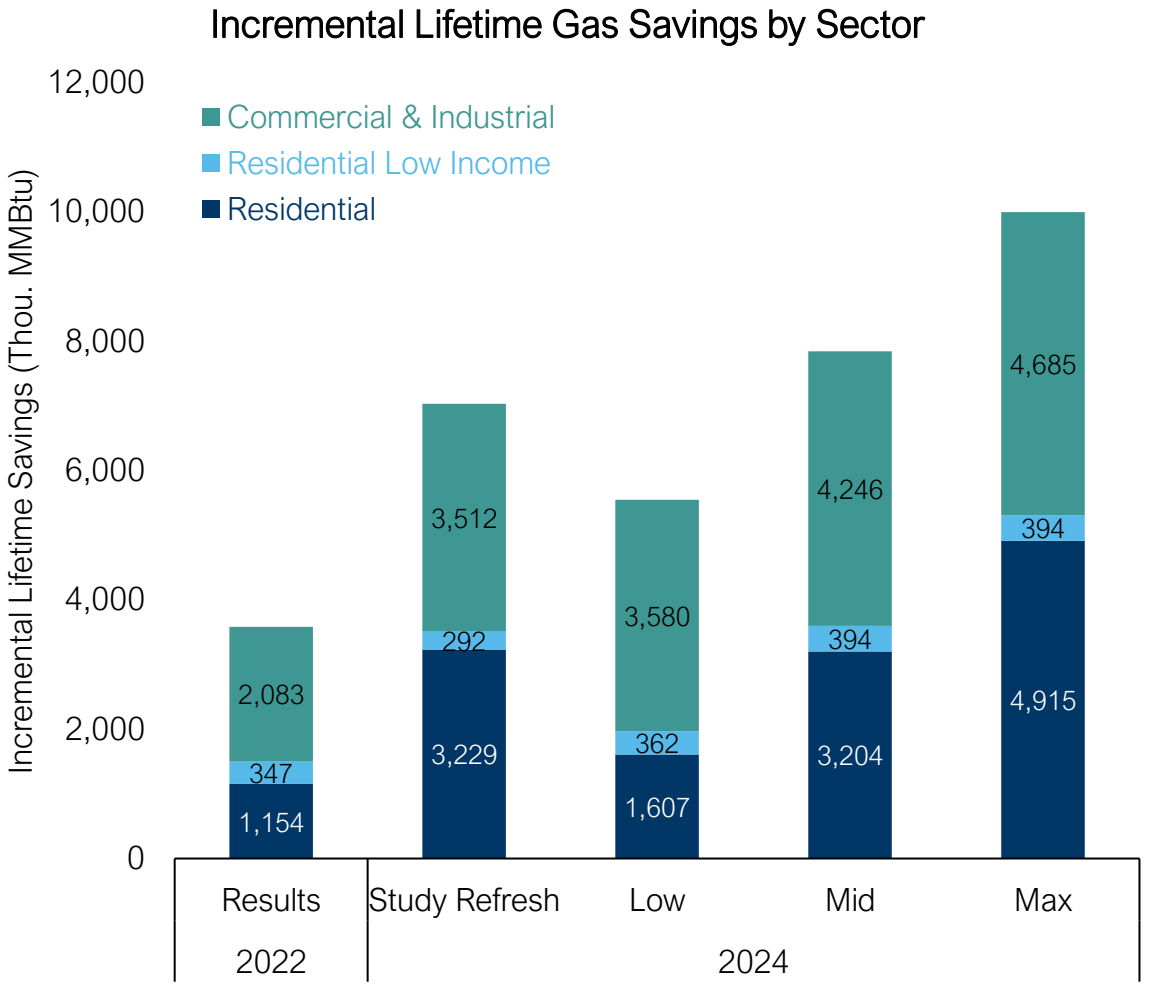
Draft Results, Electric Portfolio

- **Commercial & Industrial**
  - Savings similar to Low scenario despite higher incentives primarily due to loss of lighting-related savings opportunities
- **Residential Low Income**
  - Savings largely unchanged from original study relative to Mid and Max scenario.
- **Residential**
  - Savings fall between original study's Mid and Max scenario



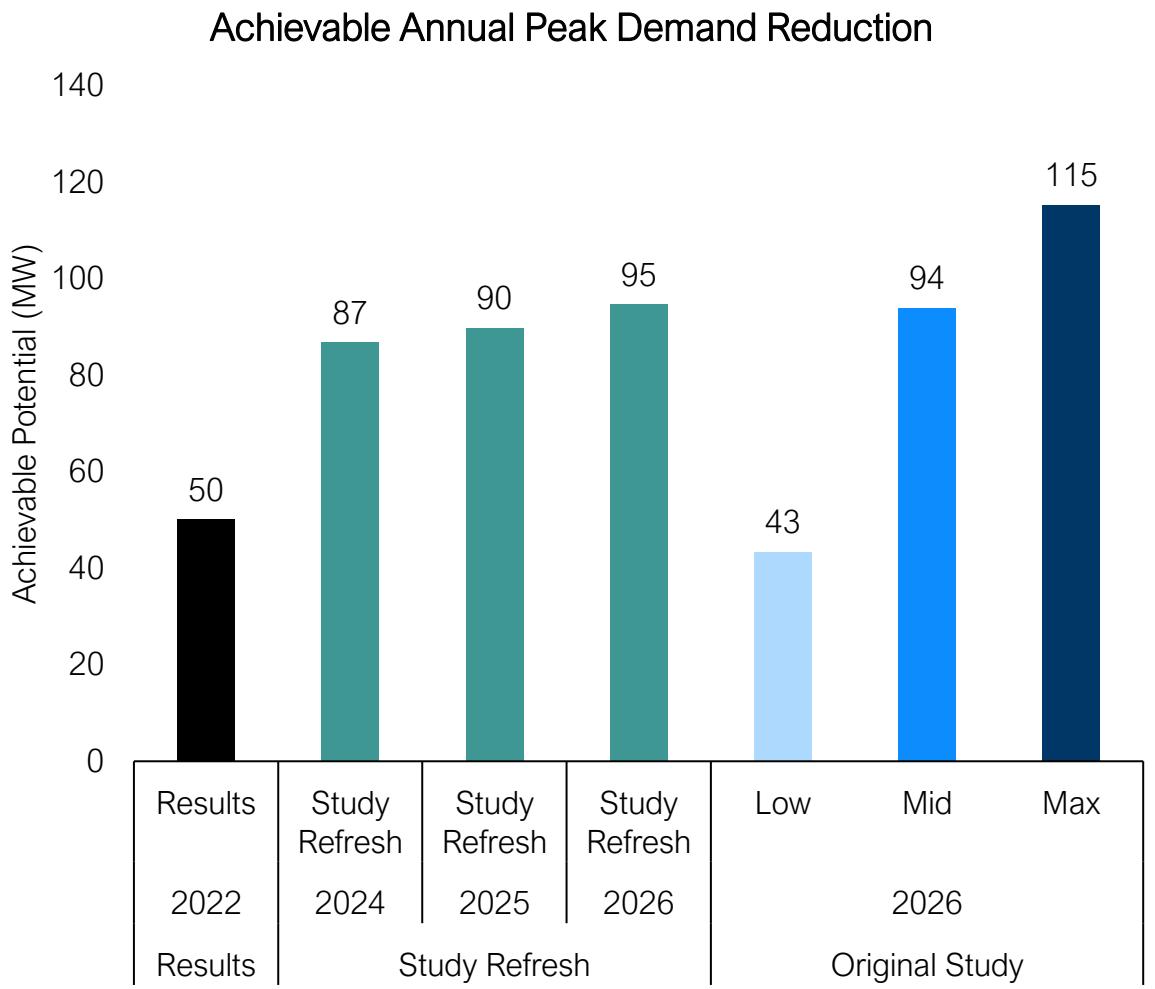
Draft Results, Gas Portfolio

- **Commercial & Industrial**
  - Savings fall below Low scenario primarily due to loss of kitchen-related savings opportunities
- **Residential Low Income**
  - Savings fall below Low scenario primarily due to loss of low flow fixture savings, which were substantial source of savings in original study
- **Residential**
  - Savings similar to Mid scenario as characterization updates for some measures offset loses due to standards updates



Draft Results, Active Demand

- **Relative to the original study, the Study Refresh scenario savings largely mirror the Mid scenario**
  - Limited changes made to model inputs and assumptions
  - Slight increase in 2026 achievable savings (relative to Mid scenario) driven by updated baseline program participation assumptions



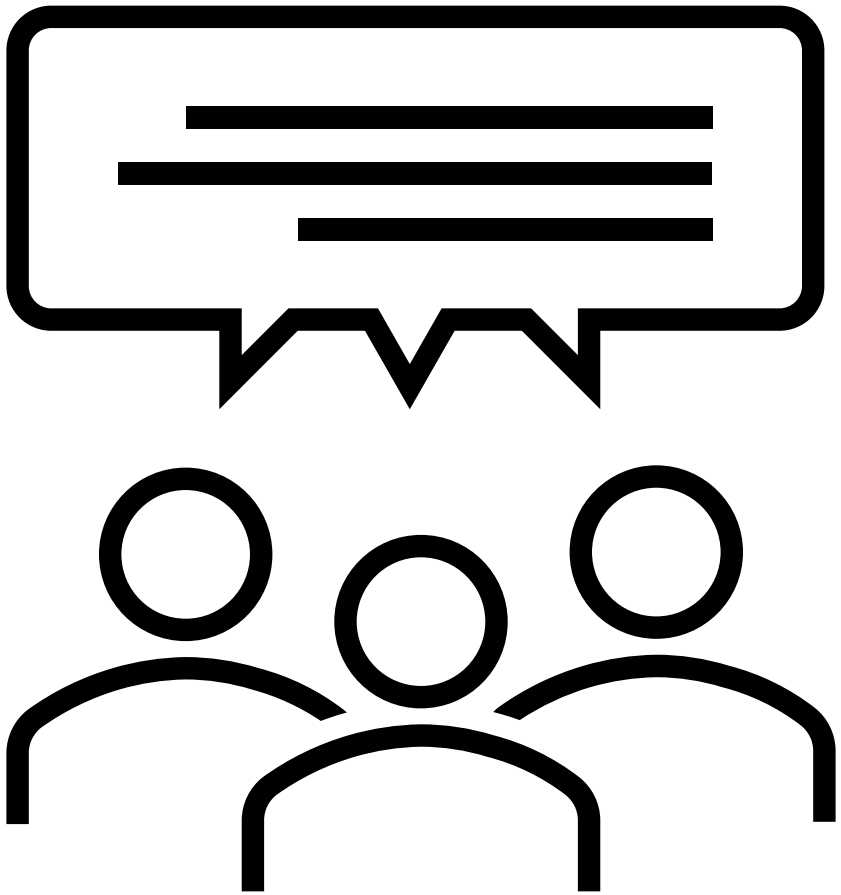
Next Steps

Continued bi-weekly check ins

Engage with Councilors for perspectives and input

Refine and finalize results, present to Council at April meeting to inform 3YP Targets

Council Member Discussion



APPENDICES

Market Potential Study Refresh

Market potential studies (MPS) are used to help inform and set the energy efficiency targets submitted to the PUC

The last MPS was completed in 2020 and covered 2021-2026

The refresh will update results for key areas for 2024-2026 to provide more accurate information

Three main applications for this data:

- Reference point for the Council from an objective third-party for setting EE targets
- Identify where the biggest EE opportunities are over the next three years
- Other stakeholders can refer to these studies to help support their arguments

Key Questions To Date

How should the Achievable Scenario be defined?

- "Ambitious Mid Scenario"
- Aggressive enabling strategies
- High incentive coverage, but less than 100% of incremental cost (this was a key assumption in Max scenario from initial study)
- Dunsky team to use professional judgement / recent MA MPS to inform specific incentive levels, will ensure they are at or above current offerings

Any New Measures Needed (would be added cost)?

- RIE, OER, and the C-Team did not identify critical gaps in the measure list, but indicated we would consider suggestions from Dunsky as they are assessing the data
  - Dunsky reported no suggested additional measures on 2/8

Key Questions To Date

How should the planned roll out for Advanced Metering in Rhode Island be handled?

- The utility proposal is to roll out in 2024 and 2025, which should be included in the study. May have different impacts on EE (where AMF is an enabling strategy for marketing) and DR (where it is a cost reduction for some measures).

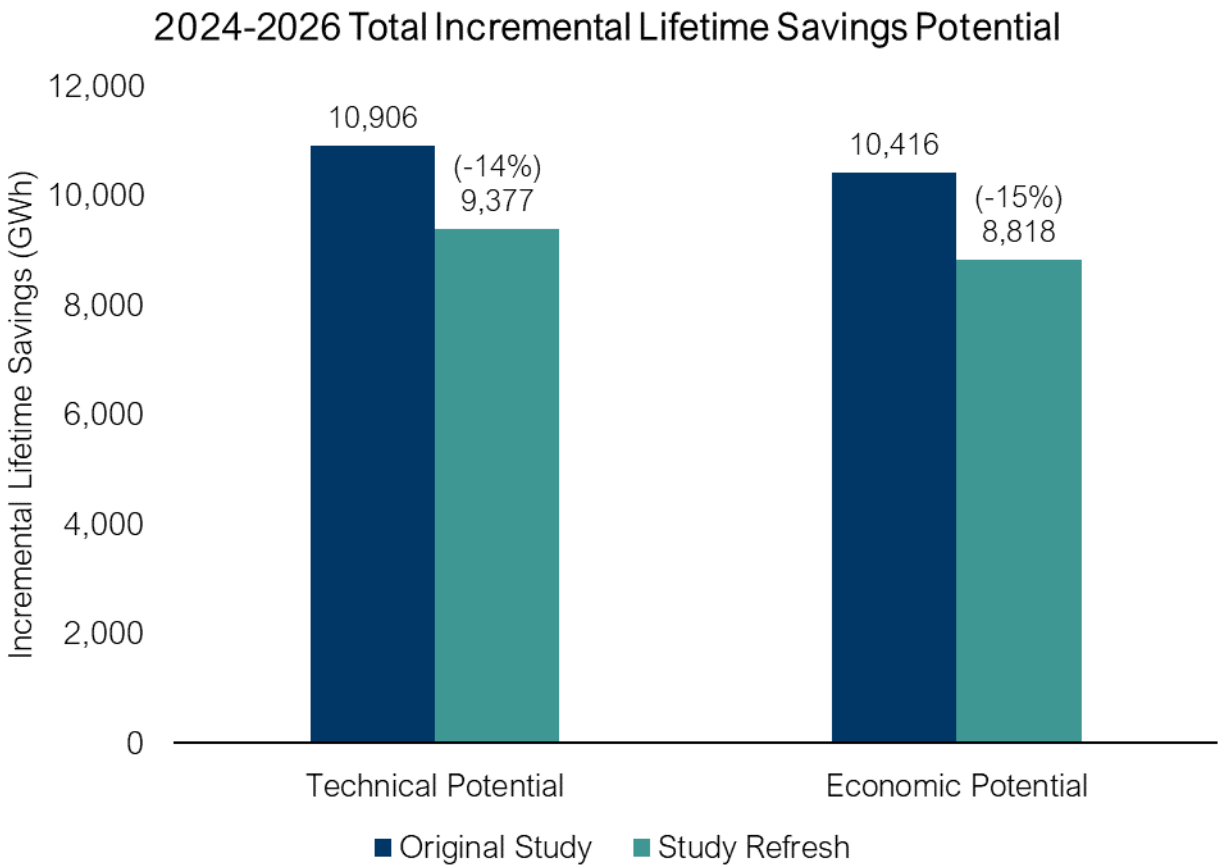
What building codes should be assumed to be in force during the 2024-2026 time period?

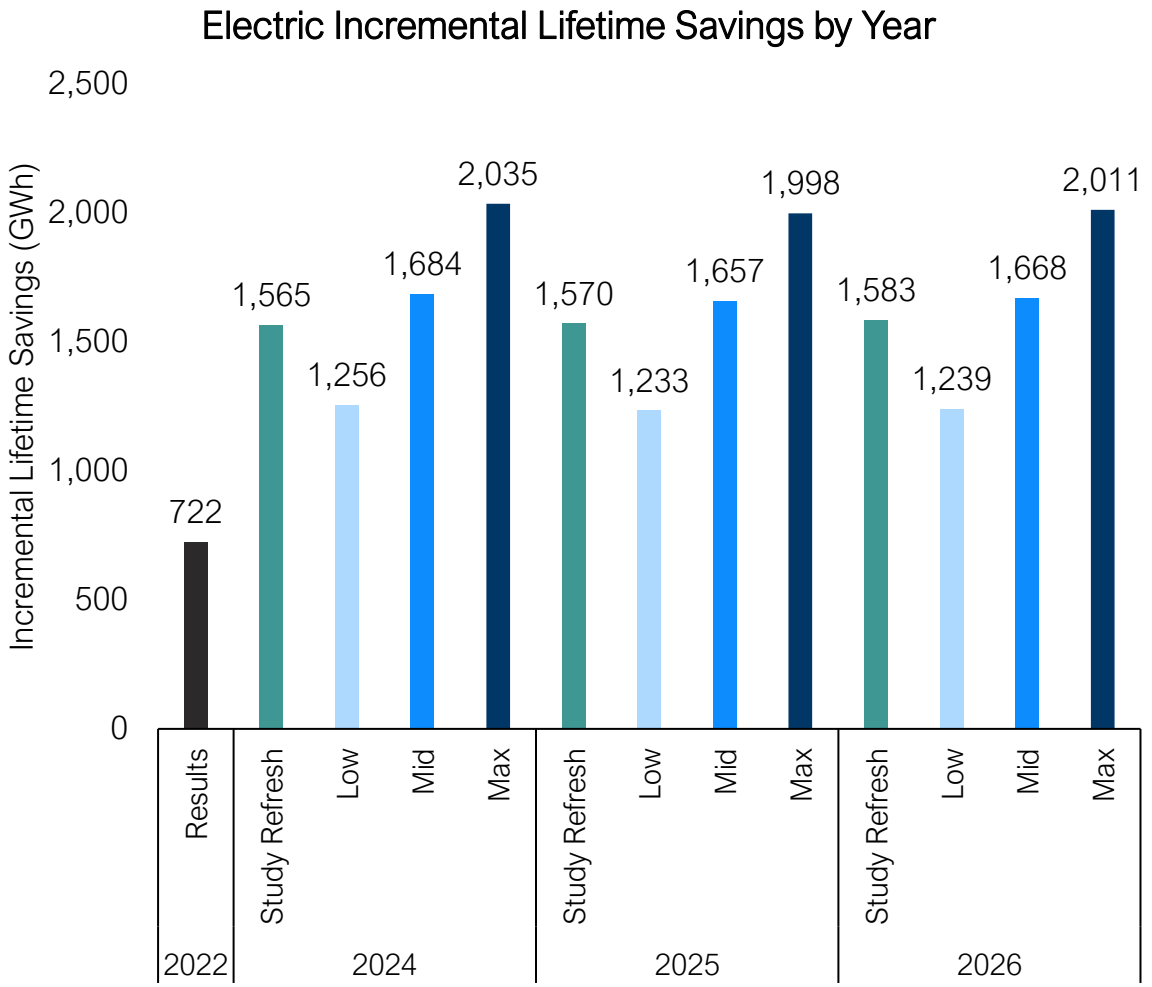
- IECC 2021 are up for consideration this year, which we should assume are adopted and come into force beginning in 2024, with a 1 year lag for projects initiated under these codes to enter EE programs

Several data clarifications were also asked on various topics, including:

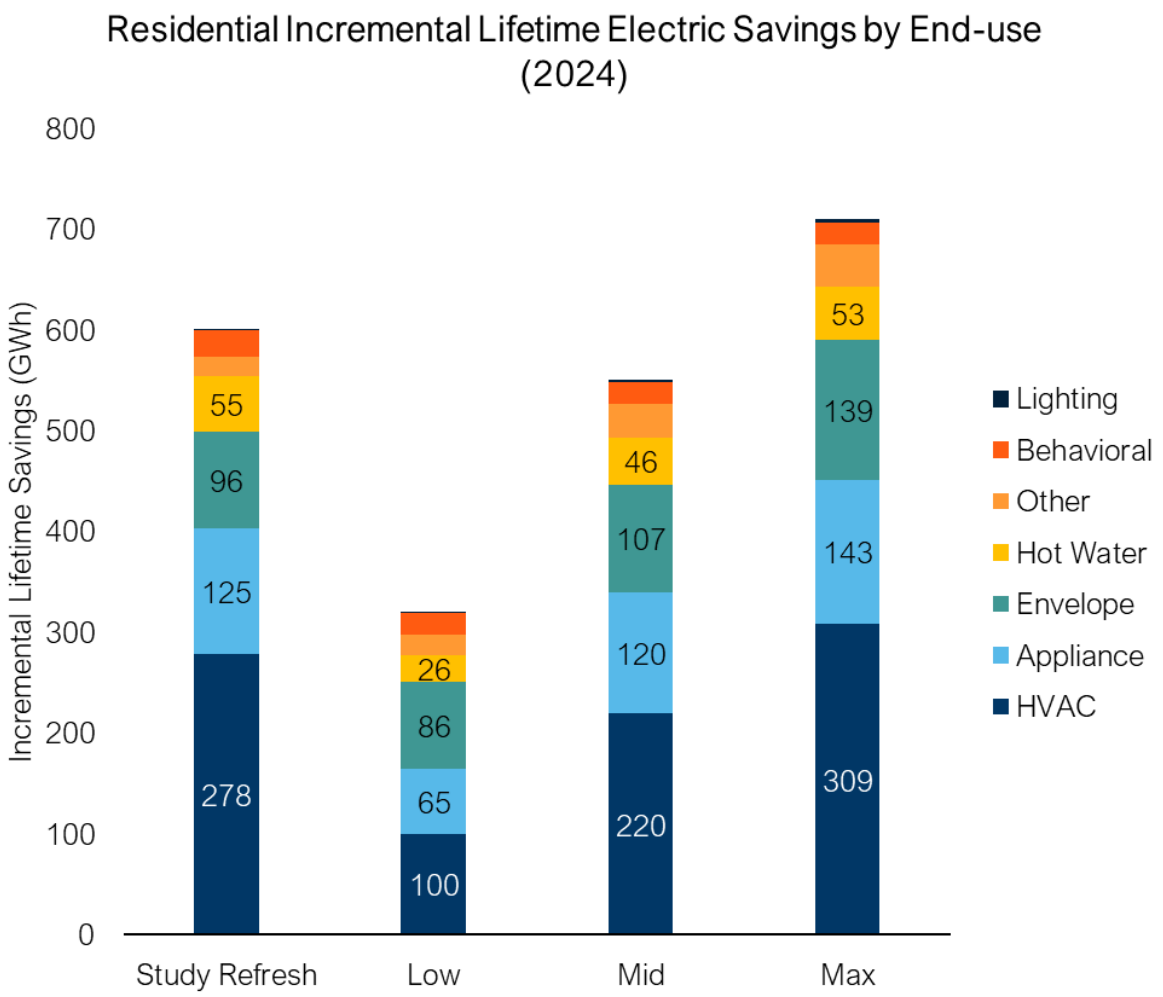
- Whether various EM&V studies, recent appliance standards are reflected in the BC model and TRM
- How to report monetary values, and reflect inflationary vs. other cost changes

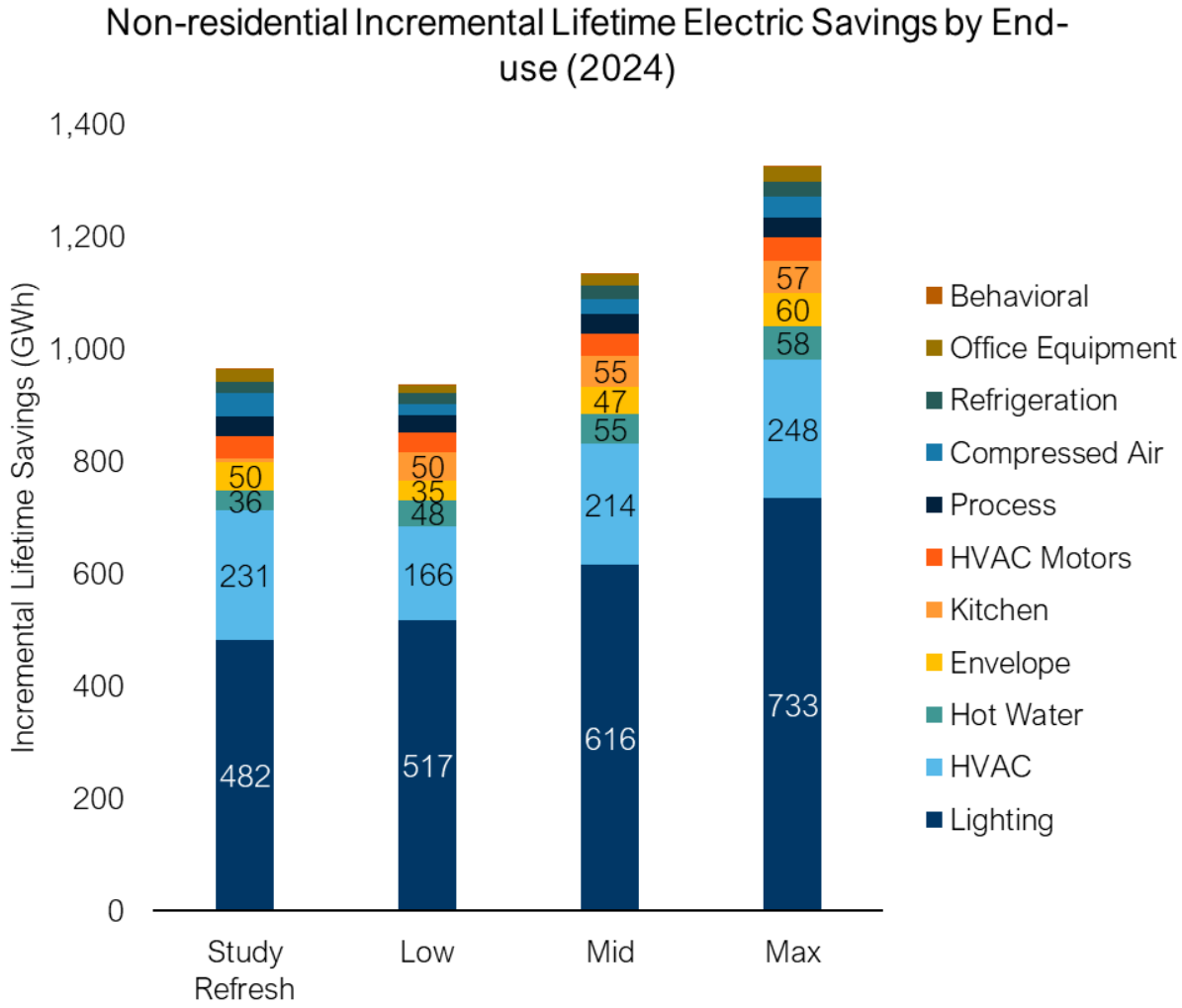
Electric, Technical, Economic and Achievable



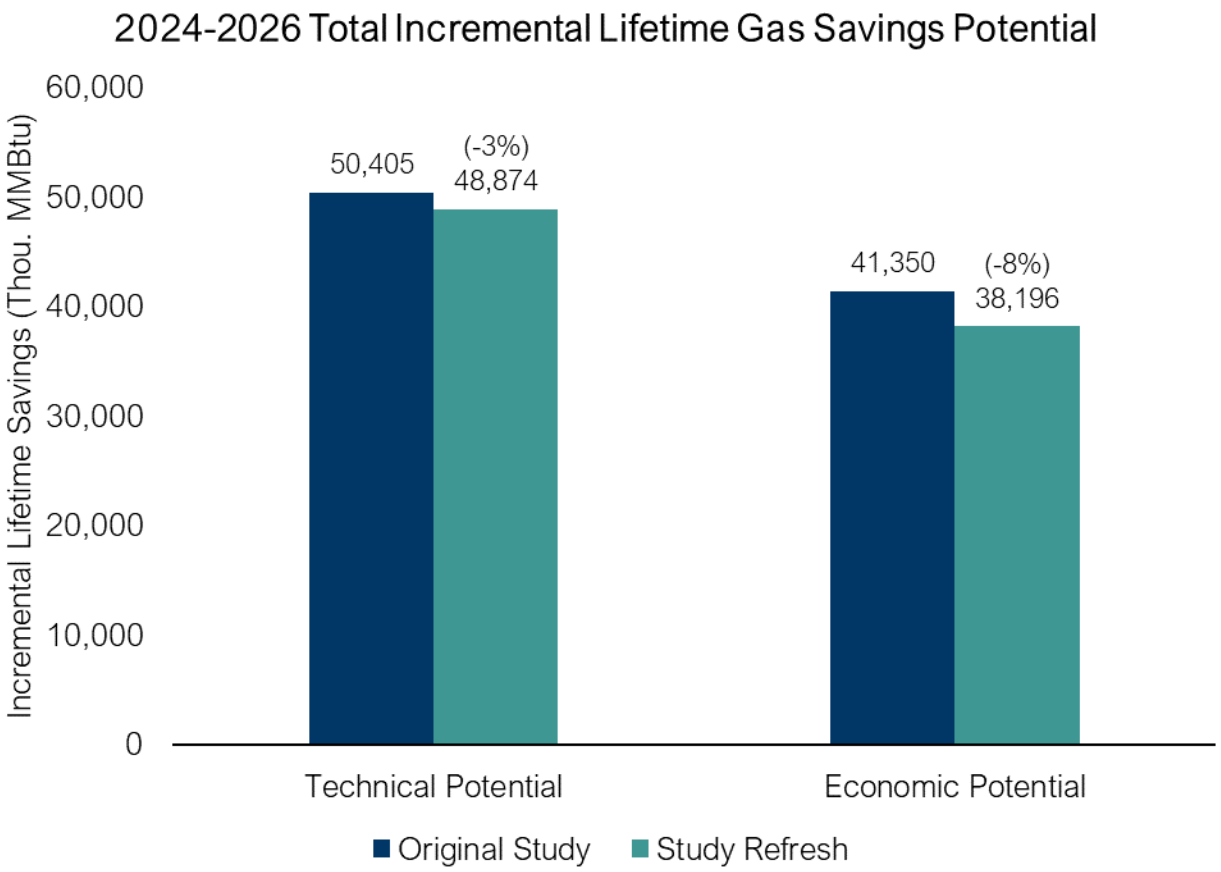


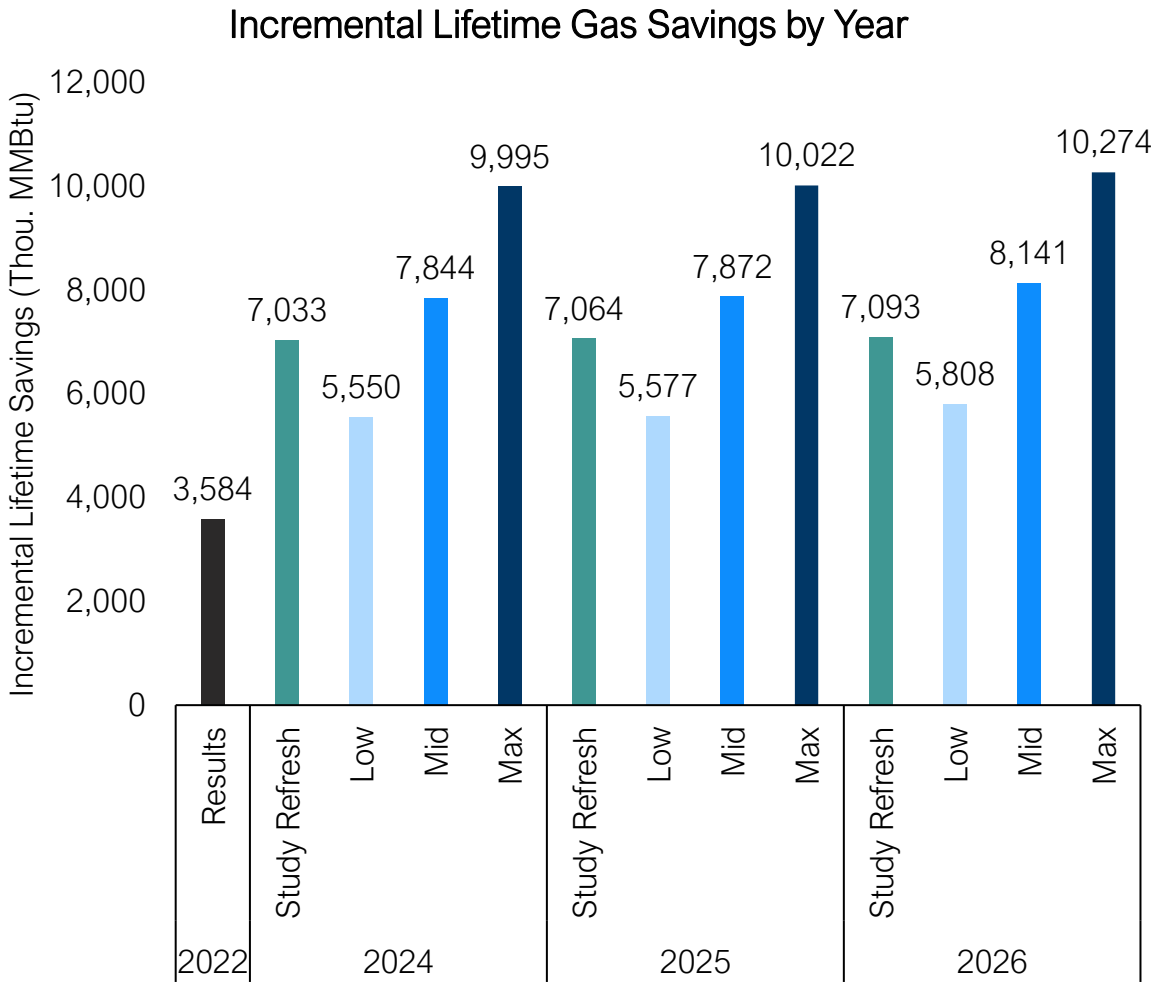
Electric, End-Use



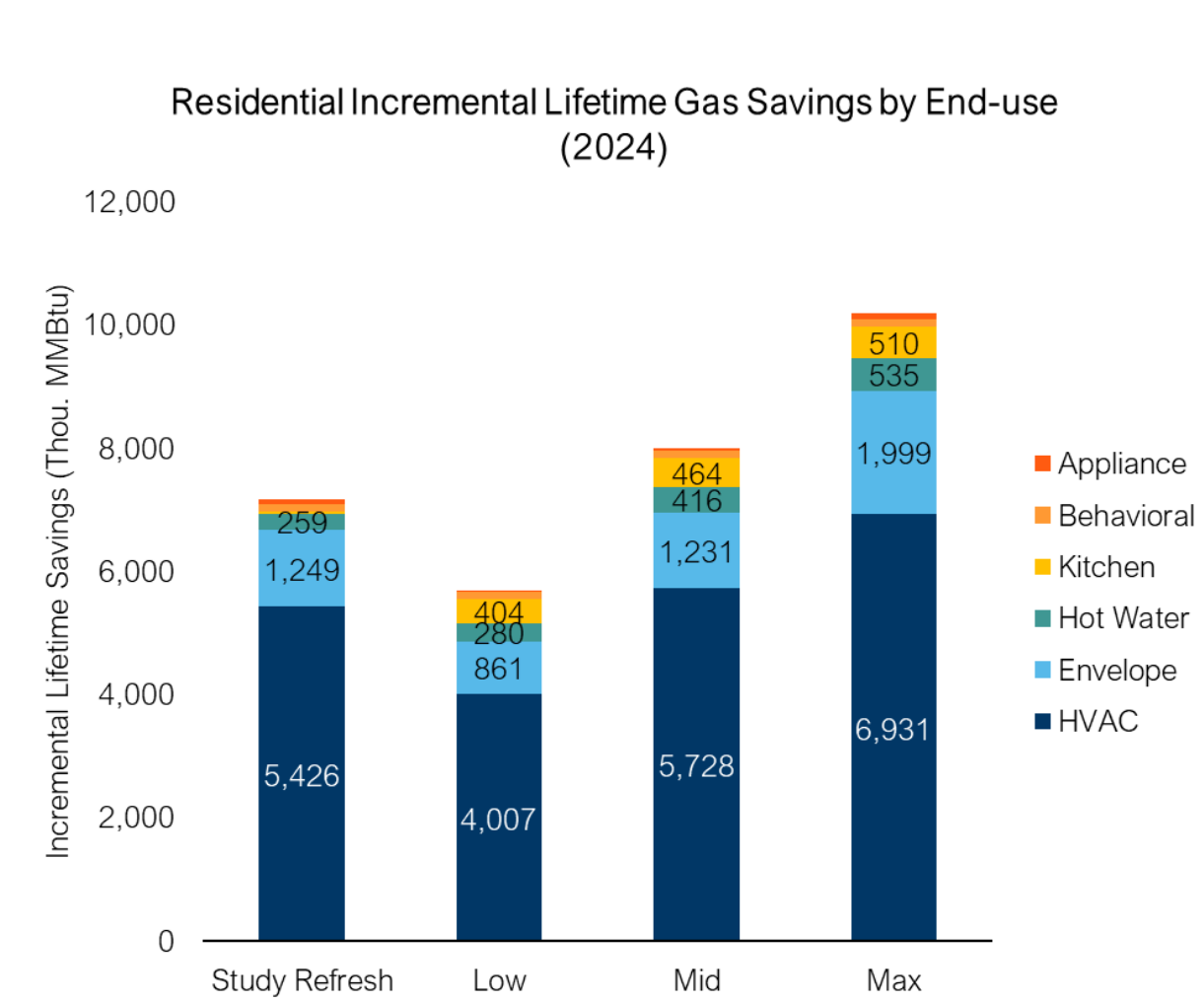


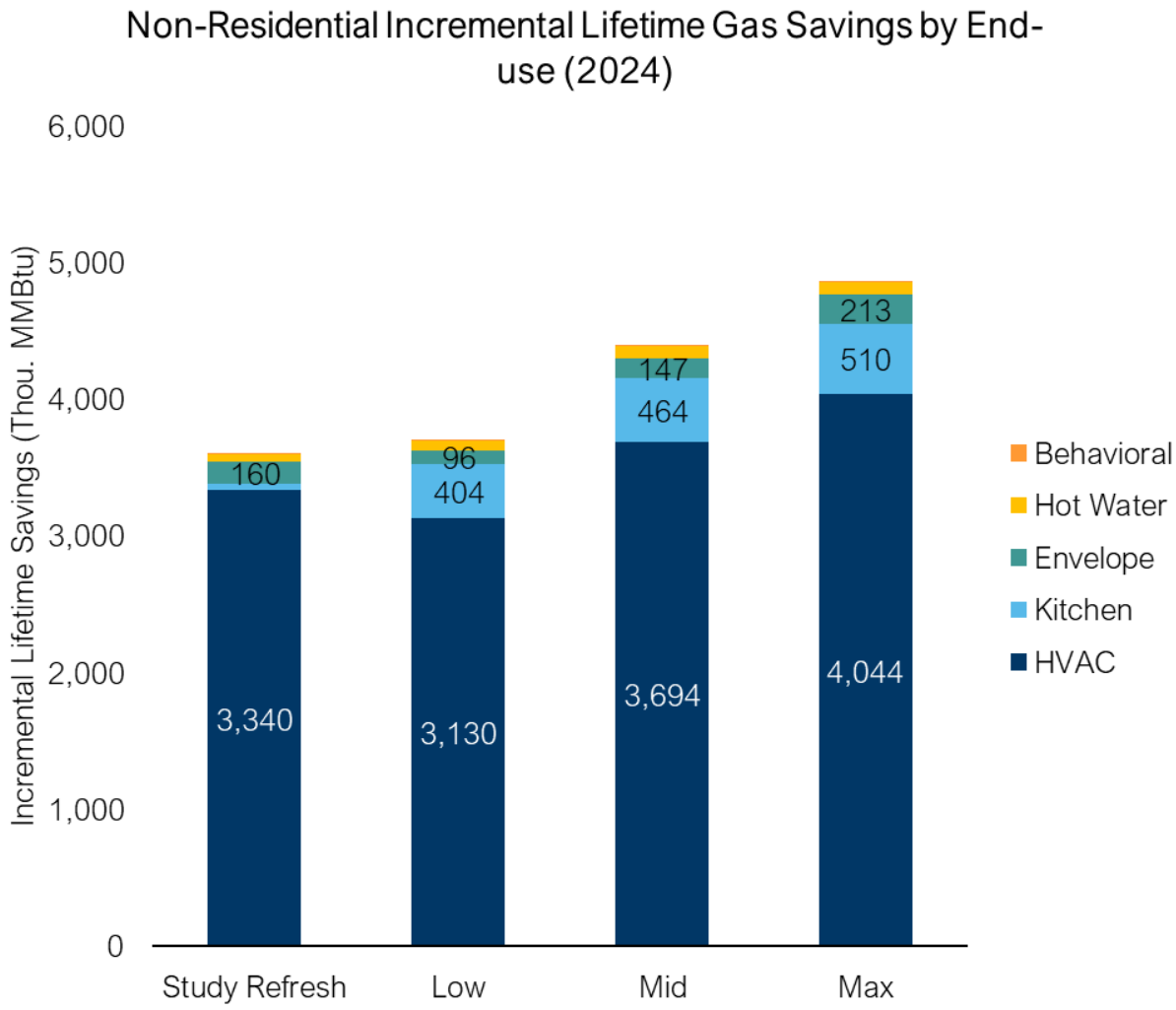
Gas, Technical, Economic and Achievable





Gas, End-Use


Residential Incremental Lifetime Gas Savings by End-use (2024)
Incremental Lifetime Savings (Thou. MMBtu)
12,000
10,000
8,000
6,000
4,000
2,000
0
259
1,249
5,426
404
280
861
4,007
464
416
1,231
5,728
510
535
1,999
6,931
Study Refresh
Low
Mid
Max
Appliance
Behavioral
Kitchen
Hot Water
Envelope
HVAC


Non-Residential Incremental Lifetime Gas Savings by End-use (2024)
Incremental Lifetime Savings (Thou. MMBtu)
6,000
5,000
4,000
3,000
2,000
1,000
0
160
3,340
96
404
3,130
147
464
3,694
213
510
4,044
Study Refresh
Low
Mid
Max
Behavioral
Hot Water
Envelope
Kitchen
HVAC

Active Demand Top Measures